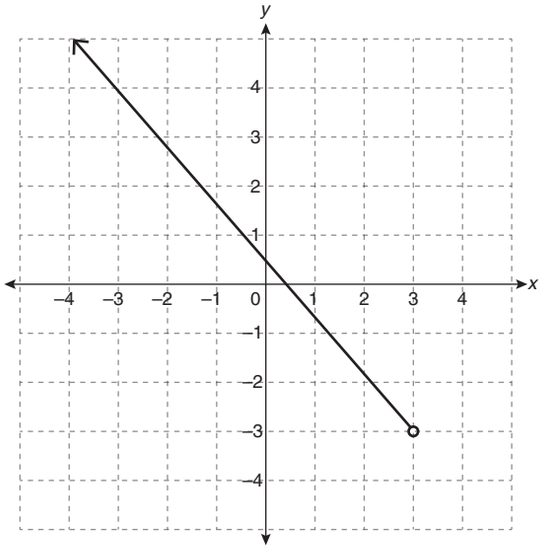
Check Up

Given the graph of the relation shown, represent the domain and range using

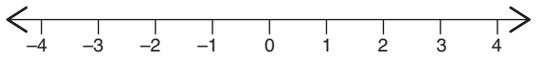
- number lines,
- interval notation,
- set-builder notation, and
- words.

1.

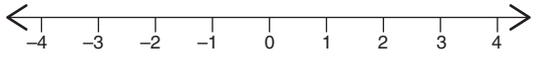


Number lines:

Domain:



Range:



Interval notation:

Domain:

Range:

Set-builder notation:

Domain:

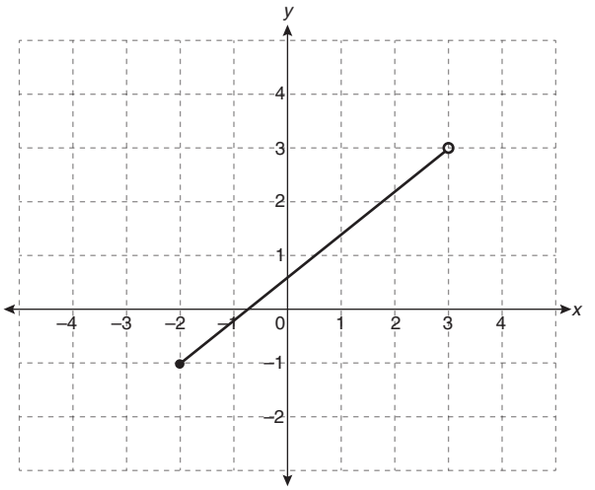
Range:

In words:

Domain:

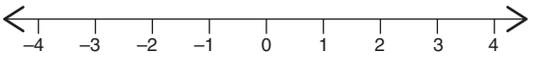
Range:

2.

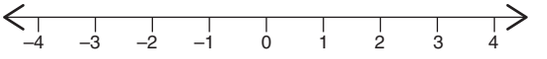


Number lines:

Domain:



Range:



Interval notation:

Domain:

Range:

Set-builder notation:

Domain:

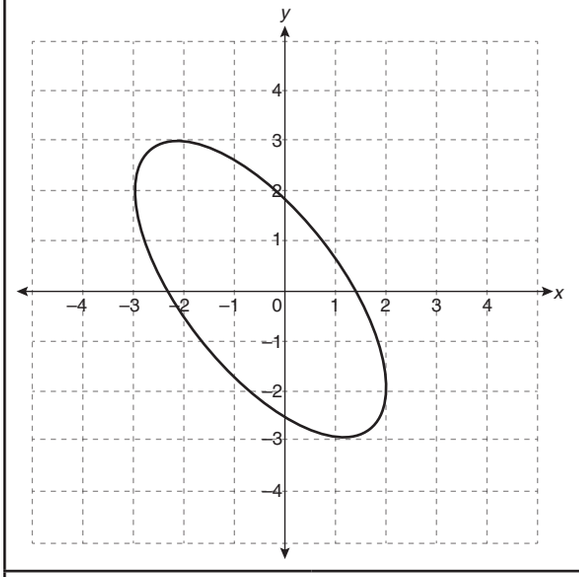
Range:

In words:

Domain:

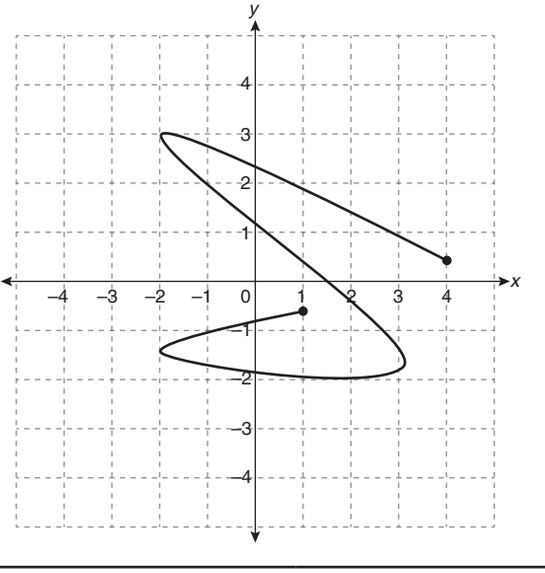
Range:

3. State the domain and range of the following relations using set builder notation and interval notation.



D:

R:



D:

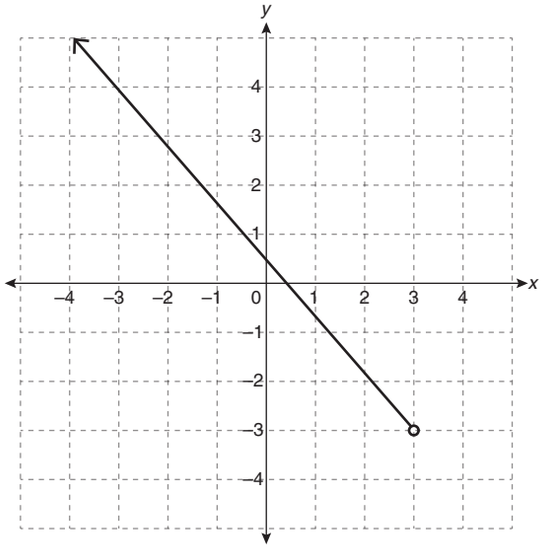
R:

☑ Compare your answers.

Given the graph of the relation shown, represent the domain and range using

- number lines,
- interval notation,
- set-builder notation, and
- words.

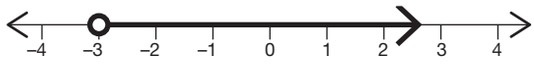
1.



Number lines:

Domain: $x < 3$

Range: $y > -3$



Interval notation:

Domain: $(-\infty, 3)$

Range: $(-3, +\infty)$

Set-builder notation:

Domain: $\{x \mid x < 3, x \in \mathrm{R}\}$

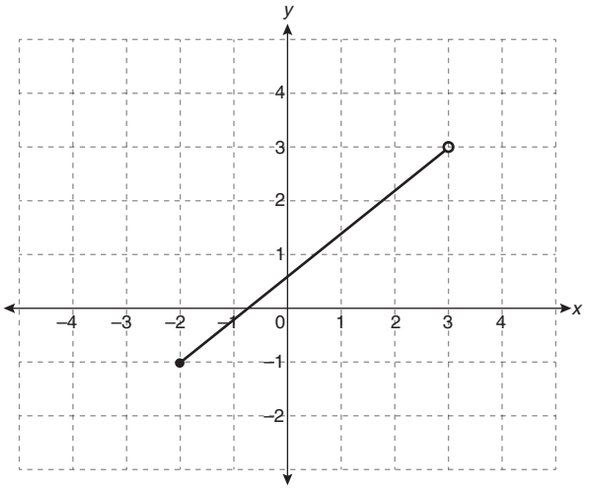
Range: $\{y \mid y > -3, y \in \mathrm{R}\}$

In words:

Domain: The set of all x such that x is less than 3, and x is a Real Number

Range: The set of all y such that y is greater than –3, and y is a Real Number

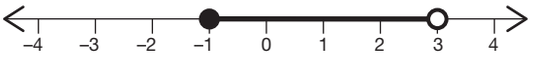
2.



Number lines:

Domain: $-2 \leq x < 3$

Range: $-1 \leq y < 3$



Interval notation:

Domain: $[-2, 3)$

Range: $[-1, 3)$

In words:

Domain: The set of all x such that x is greater than or equal to –2 and less than 3, and x is a Real Number.

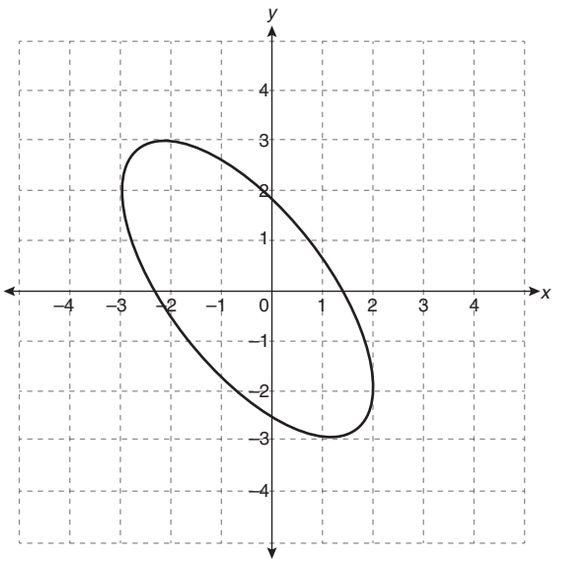
Range: The set of all y such that y is greater than or equal to –1 and less than 3, and y is a Real Number.

Set-builder notation:

Domain: $\{x \mid -2 \leq x < 3, x \in R\}$

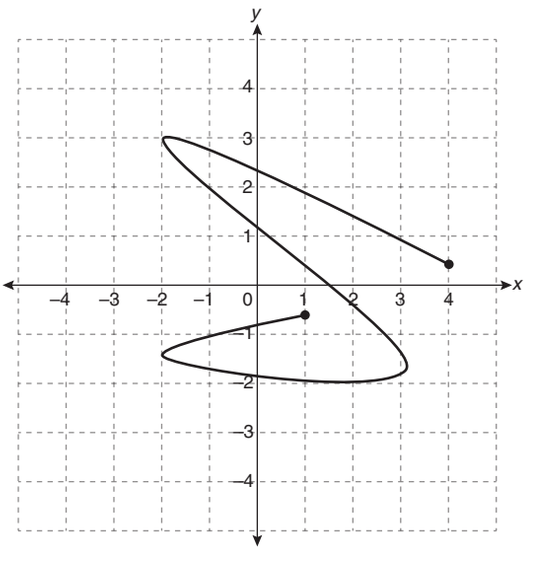
Range: $\{y \mid -1 \leq y < 3, y \in R\}$

3. State the domain and range of the following relations using set builder notation and interval notation.



D: $\{x \mid -3 \leq x \leq 2, x \in R\}$ D: $[-3, 2]$

R: $\{y \mid -3 \leq y \leq 3, y \in R\}$ R: $[-3, 3]$



D: $\{x \mid -2 \leq x \leq 4, x \in R\}$ D: $[-2, 4]$

R: $\{y \mid -2 \leq y \leq 3, y \in R\}$ R: $[-2, 3]$